

JANUARY 1945

TOOL HOLDERS by WILLIAMS

SUPERIOR DROP-FORGED TOOLS

**NEW
Carbide and
Spring Cut-Off
Tool Holders**

J. H. WILLIAMS & CO.

"The Drop-Forging People"

BUFFALO, N. Y.

District Sales Offices

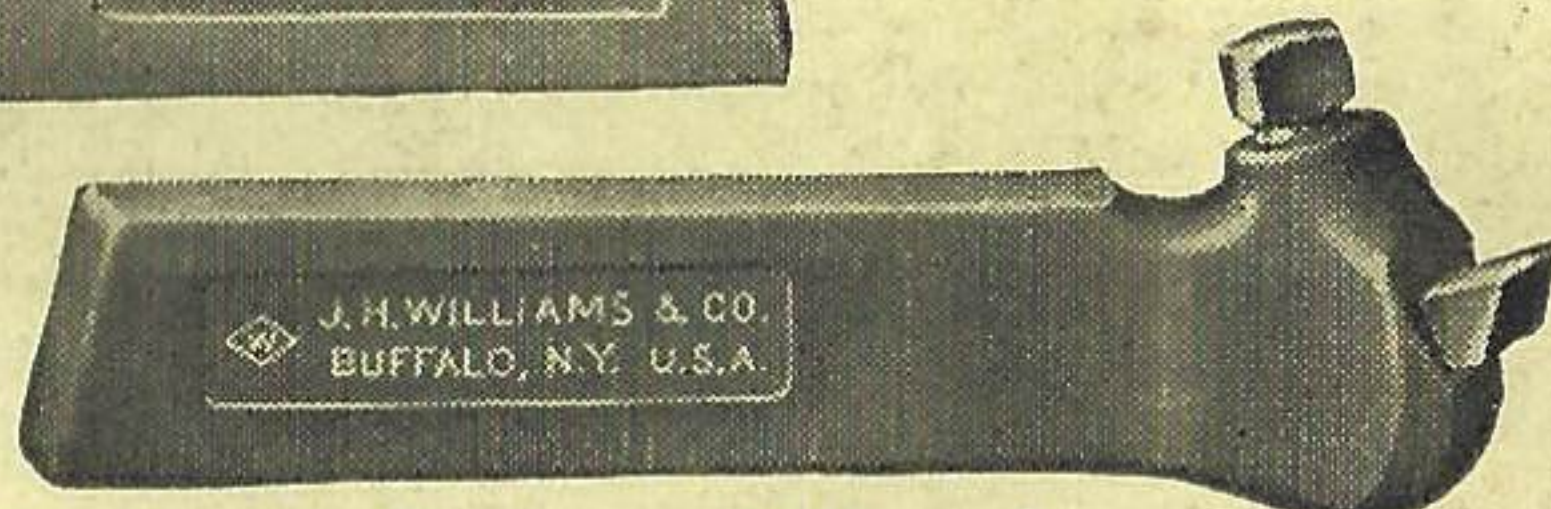
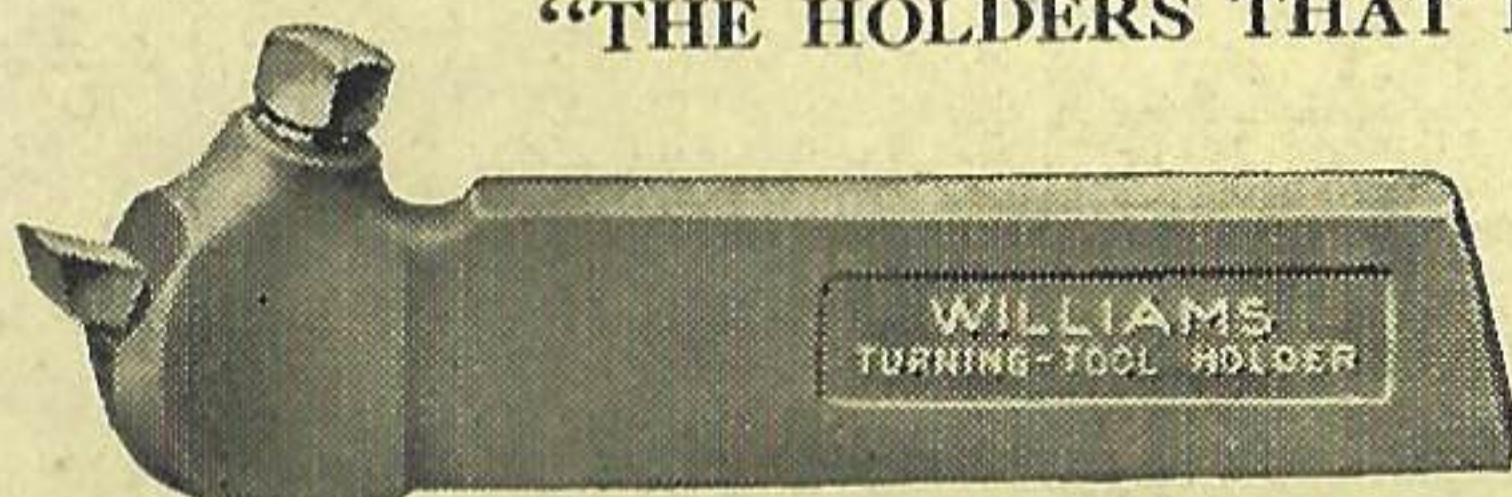
225 Lafayette Street, New York

117 North Jefferson Street, Chicago



TURNING-TOOL HOLDERS

With Straight and Offset Shanks
"THE HOLDERS THAT HOLD"



Furnished with Cutter and Wrench

These rugged Holders are drop-forged from strong, tough steel, specially heat-treated and hardened. Cutter channel is unusually long and accurately broached, providing an absolutely true and rigid seat for the cutter. No "chattering" under heavy cuts—no breaking of costly high-speed steel cutters.

Number		Holder, Size	Cutter Size Square	LIST PRICE	
Right Hand	Left Hand			Cutter Only, High Speed Steel	Complete Tool with High Speed Cutter

OFFSET SHANKS

000-R	000-L	5/16 x 1/2 x 4	3/16	\$.15	\$2.70
00-R	00-L	5/16 x 3/4 x 4-1/2	3/16	.15	2.70
0-R	0-L	3/8 x 7/8 x 5	1/4	.20	2.85
1-R	1-L	1/2 x 1-1/8 x 6	5/16	.35	3.25
2-R	2-L	5/8 x 1-3/8 x 7	3/8	.55	4.00
3-R	3-L	3/4 x 1-5/8 x 8	7/16	.90	5.40
4-R	4-L	7/8 x 1-3/4 x 9	1/2	1.30	6.90
5-R	5-L	1 x 2 x 11	5/8	2.35	9.75
6-R	6-L	1-1/4 x 2-1/4 x 13	3/4	3.85	13.50

STRAIGHT SHANKS

000-S	5/16 x 1/2 x 4	3/16	\$.15	\$2.70
00-S	5/16 x 3/4 x 4-1/2	3/16	.15	2.70
0-S	3/8 x 7/8 x 5	1/4	.20	2.85
1-S	1/2 x 1-1/8 x 6	5/16	.35	3.25
2-S	5/8 x 1-3/8 x 7	3/8	.55	4.00
3-S	3/4 x 1-5/8 x 8	7/16	.90	5.40
4-S	7/8 x 1-3/4 x 9	1/2	1.30	6.90
5-S	1 x 2 x 11	5/8	2.35	9.75
6-S	1-1/4 x 2-1/4 x 13	3/4	3.85	13.50

Turning-Tools with "drop heads" for use on lathes with clamp-tool rests and low centers, can also be supplied; ask for literature.



CARBIDE TURNING-TOOL HOLDERS

With Straight and Offset Shanks
Furnished Without Cutter



Furnished with
Wrench, but
Without Cutter



In these Tools, the Cutter is held parallel to the shank. Consequently, Cutters can be so ground as to provide maximum support for the cutting edge. This feature, plus the extremely rigid Holder, is the recognized basis for the best performance of cemented carbide cutters.

Holders are broached for either square or flat standard Carbide Cutters, but are supplied **WITHOUT CUTTERS**. These may be obtained, on short notice, directly from the manufacturers of cemented carbide "tips". Inquiries sent us for Cutters with order for Holders, or separately, will be forwarded to leading manufacturers of cemented carbides, thereby assuring customers of direct, expert assistance from carbide cutter specialists.

Carbide Cutters, as supplied by their manufacturers, are available in many grades and standardized shapes of tips. Always specify material to be cut, nature of operation, form of cutter desired, its size and shape.

Number			Holder, Size	For Cutter, Size		LIST Holder With- out Cutter
Straight Shank	Offset Shank			Square	Flat	
	Right Hand	Left Hand				

For SQUARE CUTTERS

T-0-S	T-0-R	T-0-L	3/8 x 15/16 x 6	1/4	.....	\$3.20
T-1-S	T-1-R	T-1-L	1/2 x 1-1/4 x 7	5/16	.....	3.60
T-2-S	T-2-R	T-2-L	5/8 x 1-1/2 x 8	3/8	.....	4.50
T-3-S	T-3-R	T-3-L	3/4 x 1-3/4 x 9	7/16	.....	6.00
T-4-S	T-4-R	T-4-L	7/8 x 1-7/8 x 10	1/2	.....	7.60
T-5-S	T-5-R	T-5-L	1 x 2-1/8 x 12	5/8	.....	10.80

* For FLAT CUTTERS

*FT-1-S	*FT-1-R	*FT-1-L	1/2 x 1-1/4 x 7	....	5/16x7/16	\$4.40
*FT-2-S	*FT-2-R	*FT-2-L	5/8 x 1-1/2 x 8	....	3/8 x 1/2	5.40
*FT-3-S	*FT-3-R	*FT-3-L	3/4 x 1-3/4 x 9	....	7/16x9/16	7.20
*FT-4-S	*FT-4-R	*FT-4-L	7/8 x 1-7/8 x 10	....	1/2 x 3/4	9.20
*FT-5-S	*FT-5-R	*FT-5-L	1 x 2-1/8 x 12	....	5/8 x 7/8	12.90

*Holders for Flat Cutters to be Discontinued when stock is exhausted.

WILLIAMS

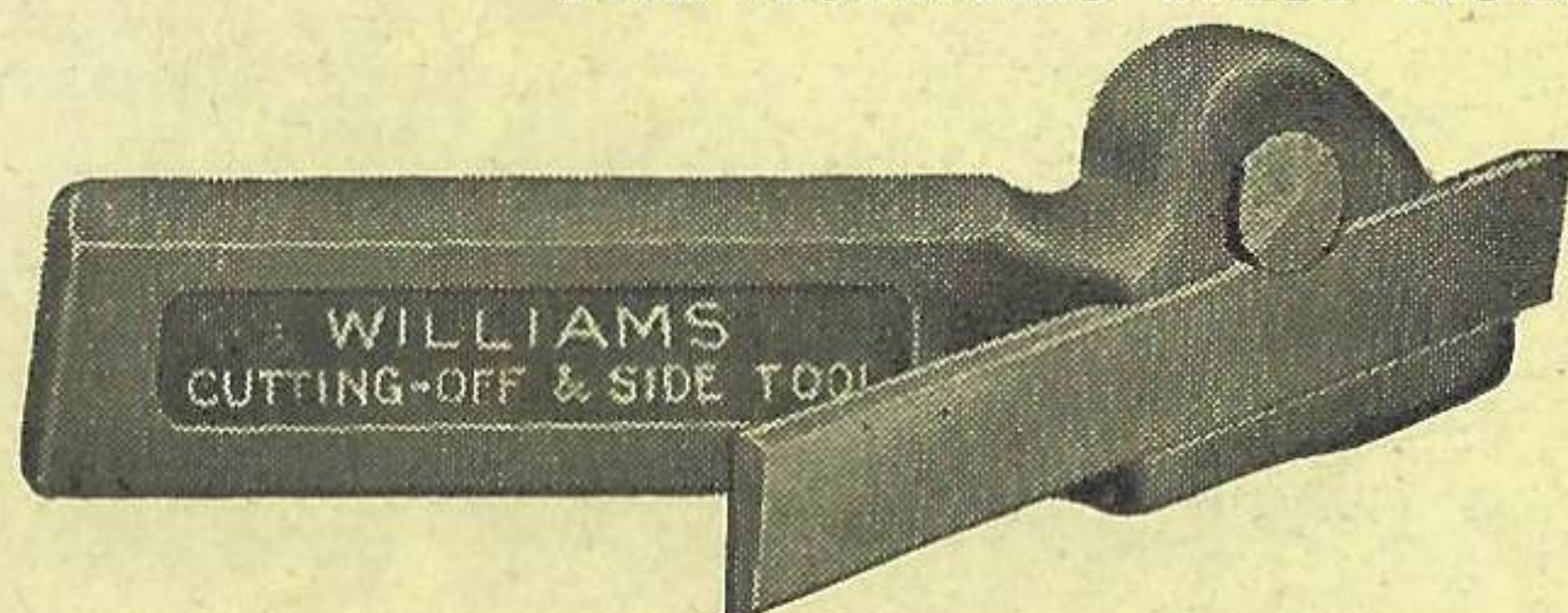
SUPERIOR DROP-FORGED TOOLS

CUTTING-OFF & SIDE-TOOL HOLDERS

For Interchangeable Cut-Off and Side Blades

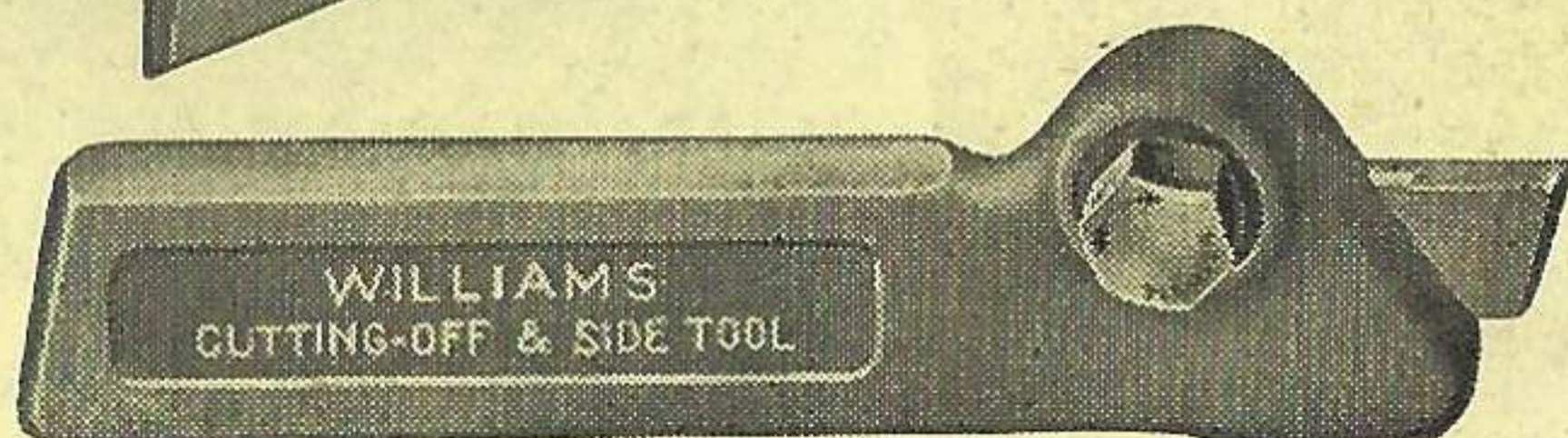
Right and Left Hand Offset and Right Hand Straight Shanks

"THE HOLDERS THAT HOLD"



ONE Holder
takes BOTH
Cutting-off
and Side
Blades

Furnished with
Finished Cutter
and Wrench



One Holder takes both Cutting-off and Side Blades, providing unique convenience and economy.

The Cam-fastening is always rapid and positive—the greater the pressure the tighter the lock. It offers full freedom for operation without removal of Holder from tool post.

The Cutter Blades are High Speed Steel, hardened and ground on both ends ready for use. By reversing the blade end for end it can be used in either Left or Right Hand Offset Shanks. They are interchangeable in Holders of corresponding size on opposite page, as explained below.

NOTE: For the convenience of users, the width of Cutter Blades and slot in the Holders for same is being altered. The new Cut-off Blades are interchangeable in other standard Holders.

This change now effective on all Holders in the table below and their numbers carry the prefix "N" (New). Extra Blades of former size to fit old Holders will be continued.

Always be sure to specify the Holder number when ordering Extra Blades. For instance, No. 20-R for Blade to fit old Holder; No. N-20-R for Blade to fit new Holder.

Cutting-Off Blade will be furnished, unless otherwise specified.

Number			Holder, Size	Cutter Blades, High Speed Steel, Finished Size				LIST PRICE			
Straight Shank Right Hand	Offset Shank			Cutting-Off Blade		Side Blade		Extra Blade, Finished		Co H Blade	
	Right Hand	Left Hand		OLD for Original Williams' Holders Only	* NEW Inter- changeable in Other Standard Holders	OLD for Original Williams' Holders Only	* NEW for New-Style Williams' Holders "N" Series	Cut- Off	Side	Cut- Off	Side
N-020-R	N-030-R	N-030-L	5/16 x 13/16	5/64 x 1/2	5/64 x .475	1/8 x 1/2	1/8 x .475	\$.60	\$.60	\$2.85	\$2.85
N-20-R	N-30-R	N-30-L	3/8 x 31/32	3/32 x 5/8	3/32 x .595	5/32 x 5/8	5/32 x .595	.90	.90	3.00	3.40
N-2-R	N-31-R	N-31-L	1/2 x 1- 3/16	1/8 x 3/4	1/8 x .735	3/16 x 3/4	3/16 x .735	.90	1.40	3.60	4.35
N-22-R	N-32-R	N-32-L	5/8 x 1- 3/8	1/8 x 7/8	1/8 x .870	1/4 x 7/8	1/4 x .870	1.30	2.30	4.50	6.00
N-23-R	N-33-R	N-33-L	3/4 x 1- 5/8	3/16 x 1	3/16 x .940	5/16 x 1	5/16 x .940	2.15	3.40	6.00	7.85
N-24-R	N-34-R	N-34-L	7/8 x 1- 3/4	3/16 x 1-1/8	3/16 x 1.100	3/8 x 1-1/8	3/8 x 1.100	2.90	5.00	7.50	.65
N-25-R	N-35-R	N-35-L	7/8 x 1- 3/4	1/4 x 1-1/8	1/4 x 1.100	.....	.....	4.00	.....	8.60	...

* New Cutter Blades will not fit old Holders, nor old Blades, new Holders.

WILLIAMS

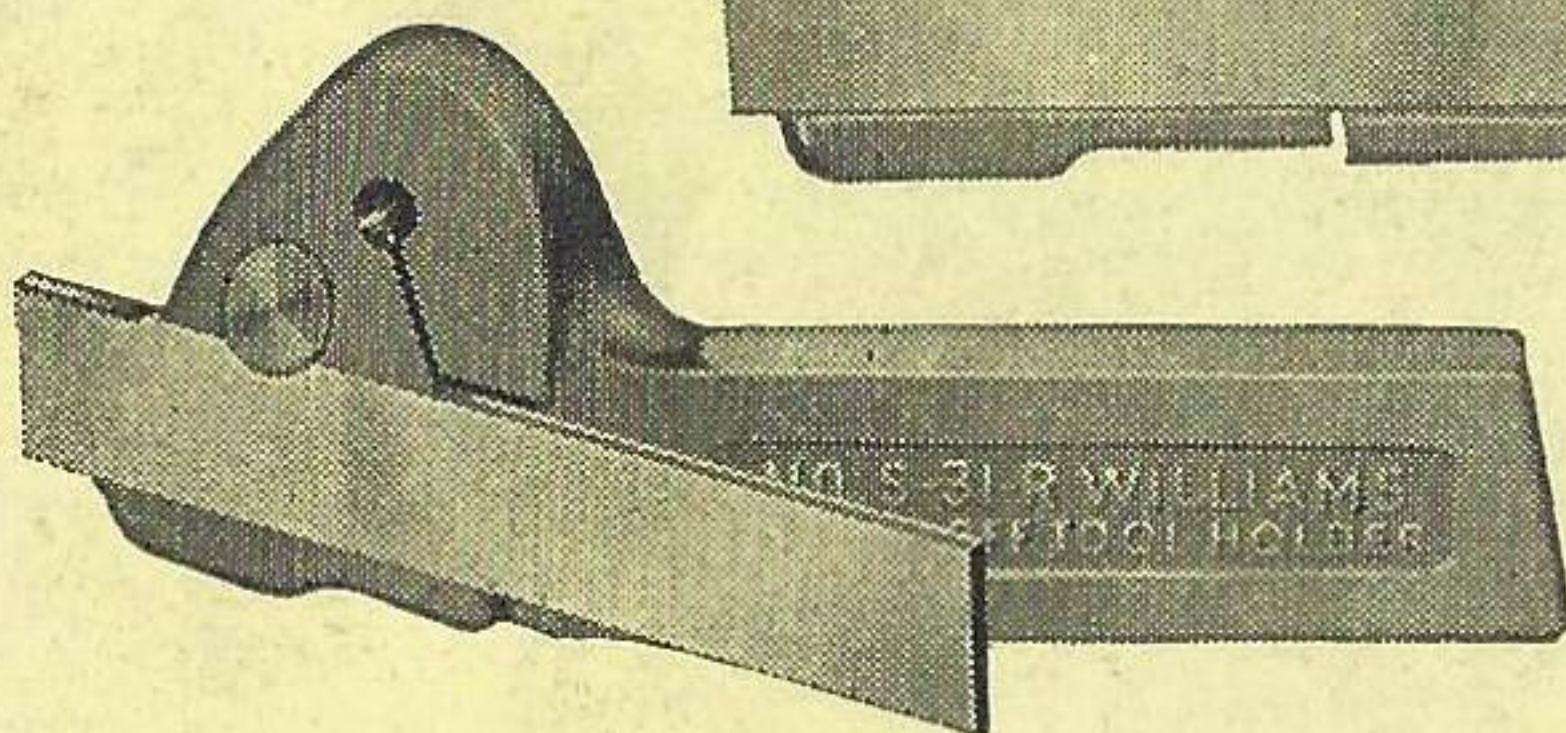
SUPERIOR DROP-FORGED TOOLS

SPRING CUTTING-OFF TOOL HOLDERS

With Straight and Right Hand Offset Shanks

"THE HOLDERS THAT HOLD"

Straight
Shank



R. H. Offset
Shank

Furnished with Finished Cutter and Wrench

These Spring Tools make comparatively simple all lathe cutting-off work — long thought the hardest of lathe operations. Due to the "goose neck" form of the Holder, the Cutter Blade is relieved of excess pressure; no chattering, no "climbing" of the work on the tool—the real cause of nearly all breakage of cutting-off tools. They are very efficient with automatic feed.

Cutter Blades are High Speed Steel, hardened and ground on both ends ready for use. By reversing the blade end for end it can be used in either Left or Right Hand Offset Shanks. They are interchangeable in Holders of corresponding size on opposite page, as explained below.

NOTE: For the convenience of users, the width of Cutter Blades and slot in the Holders for same has been altered. The new Cut-off Blades are interchangeable in other standard Holders.

This change now effective on all Holders in the table below and their numbers carry the prefix "N" (New). Extra Blades of former size to fit old Holders now in use will be continued.

Always be sure to specify the Holder number when ordering Extra Blades. For instance, No. S-21 for Blade to fit old Holder; No. NS-21 for Blade to fit new Holder.

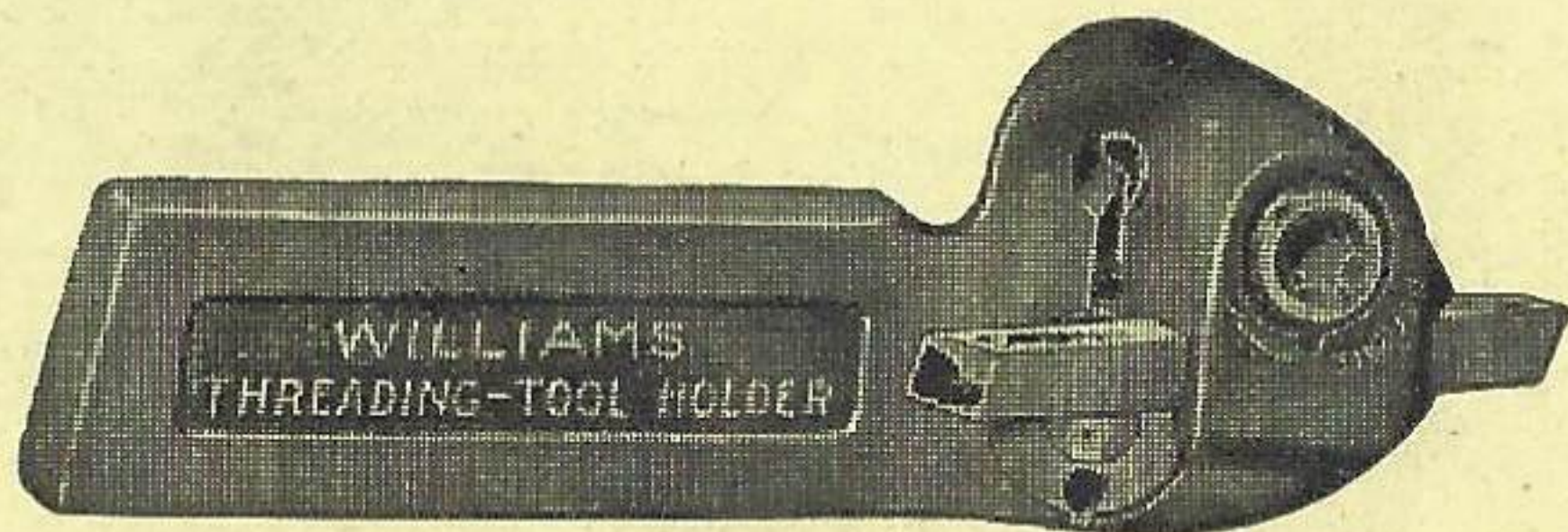
Straight Shank Holders will be furnished, unless otherwise specified.

Number		Holder, Size	Cutter Blades, High Speed Steel, Finished Size		LIST PRICE		Number	
Straight Shank	Offset Shank, Right Hand		OLD for Original Williams' Holders Only	* NEW Interchangeable in Other Standard Holders	Extra Blade, Finished, High Speed Steel	Complete Holder with Blade, High Speed Steel	Straight Shank	Offset Shank, Right Hand
.....	NS-30-RA	3/8 x 13/16	.....	3/32 x .595	\$.65	\$4.50	.....	NS-30-RA
NS-20	NS-30-R	3/8 x 31/32	3/32 x 5/8	3/32 x .595	.65	4.50	NS-20	NS-30-R
NS-21	NS-31-R	1/2 x 1 3/16	1/8 x 3/4	1/8 x .735	.90	5.40	NS-21	NS-31-R
NS-22	NS-32-R	5/8 x 1 3/8	1/8 x 7/8	1/8 x .870	1.30	6.75	NS-22	NS-32-R
NS-23	NS-33-R	3/4 x 1 5/8	1/16 x 1	3/16 x .940	2.15	9.00	NS-23	NS-33-R

* New Cutter Blades will not fit old Holders, nor old Blades, new Holders.



THREADING-TOOL HOLDERS
WITH LOCKABLE-SPRING HEAD
"THE HOLDERS THAT HOLD"



Furnished with Finished Cutter and Wrench

Williams' Threading-Tool Holders, with LOCKABLE-SPRING HEAD, are highly perfected tools for fine or coarse threading, or other Lathe work. The Nut for the Lockable-Spring head provides for the perfectly rigid backing required for coarse threading and heavy cuts; when loosened, the Holder becomes a spring-tool for finishing work. It is equally efficient as a Turning-Tool, for which purpose the High Speed Cutters furnished with the Turning-Tool Holders can be used.

The Cutter, made from High Speed Steel, is finished, ready for use. Each end is ground, the "V" point forming either an angle of 60° for U. S. Std. or 55° for Whitworth Std. threads, as desired.

Number New	Holder, Size	Cutter, Size Square	LIST PRICE		Number New
			Extra Finished Cutter, High Speed	Complete With High Speed Cutter	
S-50	3/8 x 7/8	1/4	\$.45	\$4.15	S-50
S-51	1/2 x 1-1/8	5/16	.55	5.00	S-51
S-52	5/8 x 1-3/8	3/8	.70	6.40	S-52



THREADING-TOOL HOLDERS

WITH FORMED CUTTER

"THE HOLDERS THAT HOLD"



Furnished with Finished Cutter and Wrench

Williams' Threading-Tool Holders, with FORMED CUTTER (High Speed Steel), assure threads that fit perfectly, since in re-sharpening the Cutter, it is necessary to grind its top edge only. Consequently, the point will always retain the proper form and angle as originally supplied.

The High Speed Cutter is ground to an included angle of 60° and is backed off for proper clearance. Its rear, flat edge is eccentrically formed; the hardened stop screw, bearing against it, provides positive and accurate adjustment.

Number	Holder, Size	Cutter	LIST PRICE		Number
			Extra Finished Cutter, High Speed	Complete With High Speed Cutter	
C-050	5/16 x 3/4	Formed	\$2.65	\$4.15	C-050
C-50	3/8 x 7/8	"	2.65	4.15	C-50
C-51	1/2 x 1-1/8	"	3.15	5.00	C-51
C-52	5/8 x 1-3/8	"	4.15	6.40	C-52

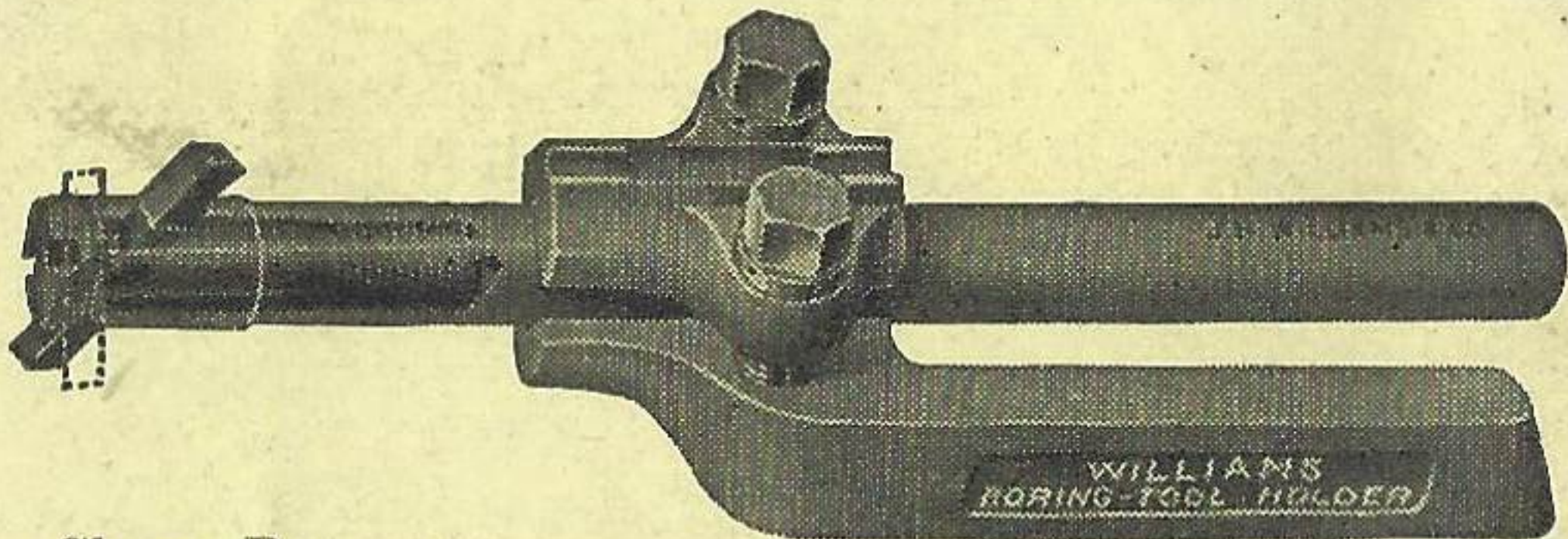
WILLIAMS

SUPERIOR DROP-FORGED TOOLS

BORING-TOOL HOLDERS

Each Holder Takes Many Sizes of Bars

"THE HOLDERS THAT HOLD"



Sleeve Bar



Plain Bar

Furnished with either Sleeve or Plain Bar, 1 each 45° and 90° Cutter and Finished Wrenches.

Each Boring Tool holds securely many sizes of Bars without requiring bushings or sleeves. Any size Bar within the capacity of the Holder can be inserted instantly; no lost time looking for loose parts.

Standard size Sleeve Bar will be supplied, unless otherwise specified.

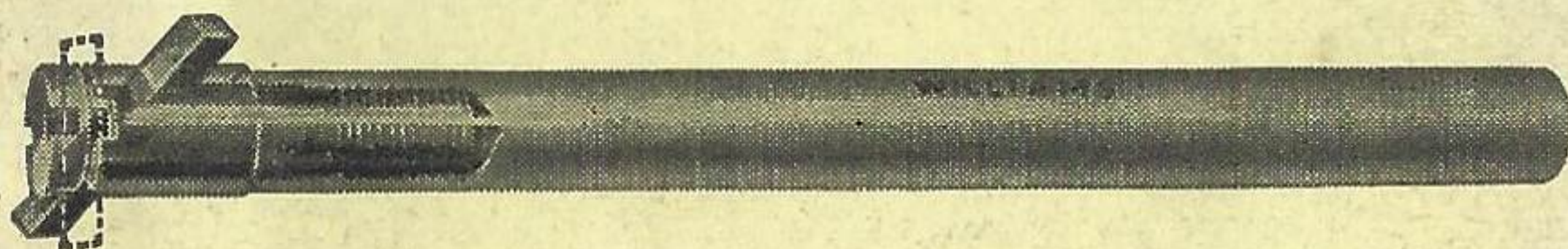
No.	Holder, Size	Holder, Capacity for Bars, Size Diameter	Standard Bar, Size Diameter	LIST PRICE	
				Complete Holder	
				With Plain Bar, High Speed Cutters	With Sleeve Bar, High Speed Cutters
080	5/16 x 3/4	3/16 to 1/2	1/2	\$4.30	\$ 4.90
80	3/8 x 7/8	1/4 to 5/8	5/8	4.30	4.90
81	1/2 x 1-1/8	1/4 to 3/4	3/4	5.00	5.80
82	5/8 x 1-3/8	3/8 to 15/16	15/16	6.50	7.65
83	3/4 x 1-5/8	1/2 to 1-1/8	1-1/8	9.60	10.85

Bar and Cutter details on following page.

WILLIAMS

SUPERIOR DROP-FORGED TOOLS

BORING-BARS AND CUTTERS FOR WILLIAMS' BORING-TOOL HOLDERS AND POSTS



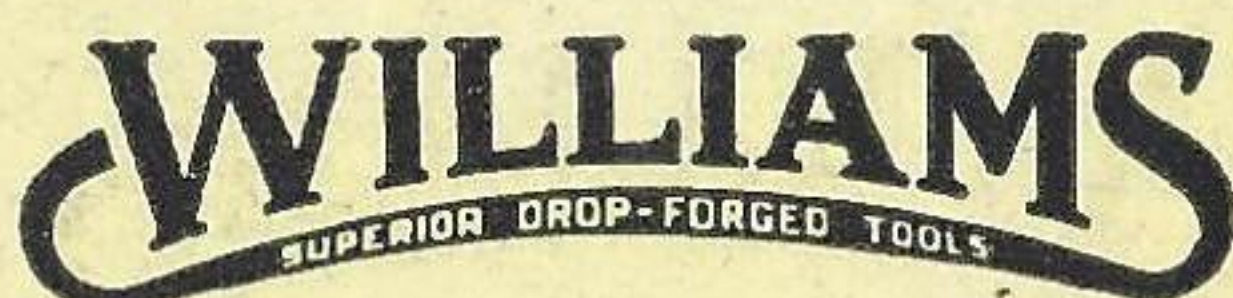
Sleeve Bar



Plain Bar

Furnished with 2 Cutters and Wrench
Details of Holders on previous page; Posts, on page 11.

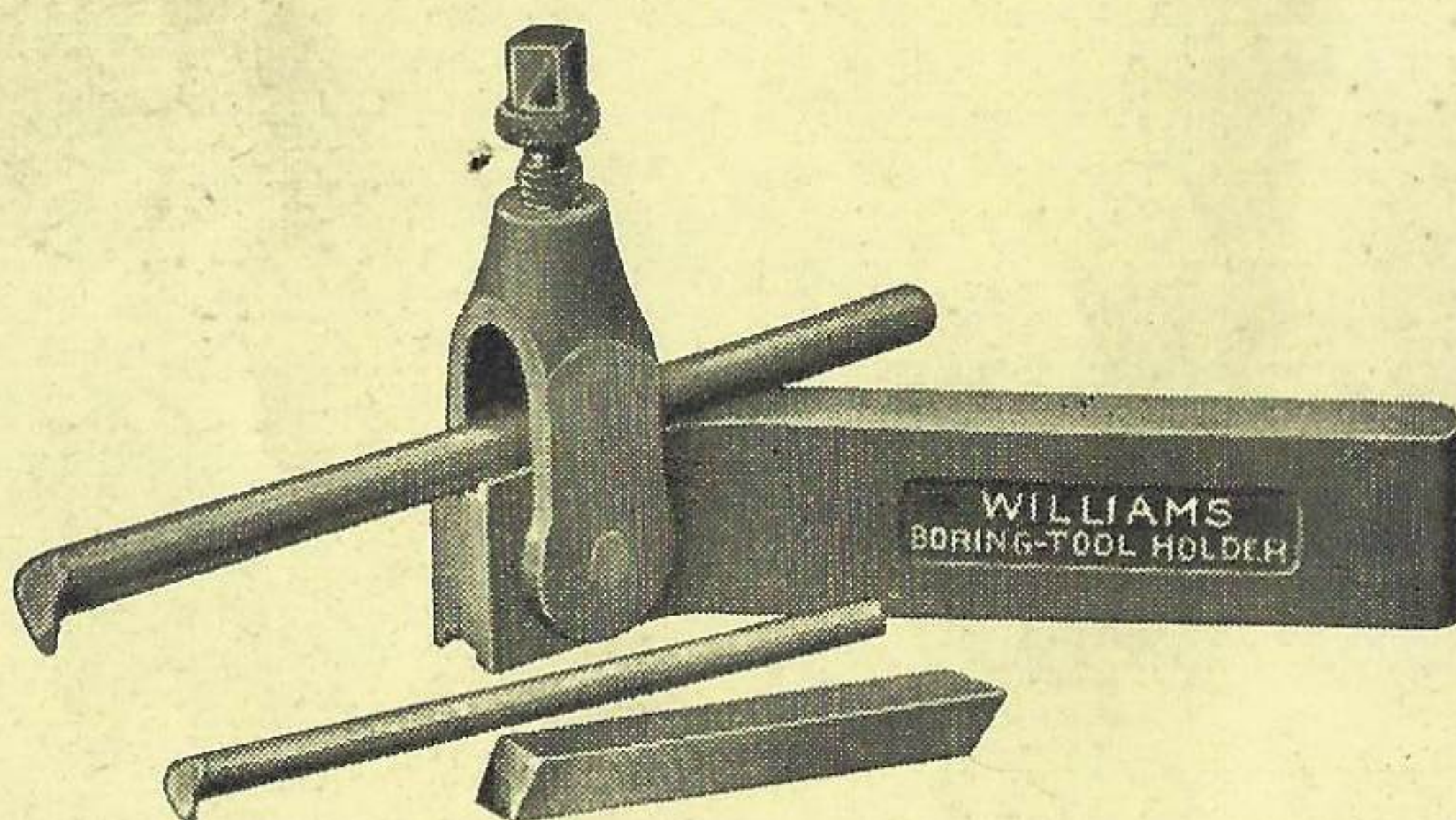
Boring-Bars Approximate Size		For Use with Holder and Post Num- ber	Cutters		LIST PRICE		
Plain	Sleeve		Size	For Use At Angles of	Cutter Only High Speed Steel	Complete Bar Plain with High Speed Cutters	Sleeve with High Speed Cutters
$\frac{1}{2}$ x $8\frac{1}{8}$	$\frac{1}{2}$ x $7\frac{5}{8}$	080-83	$\frac{3}{16}$ x 1	90°	\$.10	\$ 2.40	\$ 3.00
		2-3	$\frac{3}{16}$ x $1\frac{1}{2}$	45°	.12		
$\frac{5}{8}$ x $10\frac{1}{8}$	$\frac{5}{8}$ x $9\frac{1}{8}$	80-83	$\frac{3}{16}$ x 1	90°	.10	2.40	3.00
		2-4	$\frac{3}{16}$ x $1\frac{1}{2}$	45°	.12		
$\frac{3}{4}$ x $12\frac{1}{8}$	$\frac{3}{4}$ x 11	81-83	$\frac{1}{4}$ x $1\frac{1}{4}$	90°	.15	2.95	3.75
		2-5	$\frac{1}{4}$ x 2	45°	.19		
$1\frac{5}{16}$ x $14\frac{1}{8}$	$1\frac{5}{16}$ x $13\frac{1}{4}$	82-83	$\frac{5}{16}$ x $1\frac{1}{2}$	90°	.24	4.25	5.40
		2-5	$\frac{5}{16}$ x $2\frac{1}{2}$	45°	.32		
$1\frac{1}{2}$ x $16\frac{3}{4}$	$1\frac{1}{8}$ x 16	83	$\frac{3}{8}$ x $1\frac{7}{8}$	90°	.35	6.25	7.50
		2-5	$\frac{3}{8}$ x 3	45°	.50		
$1\frac{5}{16}$ x 20	$1\frac{5}{16}$ x 19	2-5	$\frac{3}{8}$ x $2\frac{1}{8}$	90°	.40	9.00	10.50
			$\frac{3}{8}$ x $3\frac{1}{4}$	45°	.55		
$1\frac{1}{2}$ x $23\frac{1}{2}$	$1\frac{1}{2}$ x $23\frac{1}{4}$	3-5	$\frac{7}{16}$ x $2\frac{1}{4}$	90°	.60	11.75	13.50
			$\frac{7}{16}$ x $3\frac{3}{8}$	45°	.85		
$1\frac{13}{16}$ x 28	$1\frac{13}{16}$ x $27\frac{1}{4}$	4-5	$\frac{1}{2}$ x $2\frac{5}{8}$	90°	.90	17.50	19.50
			$\frac{1}{2}$ x 4	45°	1.30		
$2\frac{1}{4}$ x 34	$2\frac{1}{4}$ x 33	5	$\frac{5}{8}$ x $3\frac{1}{8}$	90°	1.70	31.00	34.50
			$\frac{5}{8}$ x $4\frac{3}{4}$	45°	2.35		



LIGHT BORING-TOOL HOLDERS

For Small, Light Boring, Turning, etc.
Each Holder Takes Several Sizes of Bars

“THE HOLDERS THAT HOLD”



Furnished with 2 Bars, 1 Square Cutter and Wrench.

This combination Holder is very handy and economical for tool room use and for all small work—not only in boring small diameters, threading, etc., but also in turning.

BORING. Each tool will hold a number of sizes of Bars; two, varying 1/8" in diameter, are supplied with each Holder. The Bars are High Speed steel, carefully hardened and ground, ready for use.

TURNING. The Holder, with offset shank, is reversible for right and left hand work. A hardened, High Speed Steel square Cutter with ends beveled to a “diamond point” for easy grinding to desired form, is supplied with each tool.

No.	Holder, Size Shank	With Each Holder		LIST PRICE	
		2 Bars High Speed Steel Diam.	1 High Speed Square Cutter	Square Cutter Only	Com- plete Hold
15	3/8 x 3/4	1/8 and 1/4	1/4	\$.20	\$4.15
16	1/2 x 1	3/16 and 5/16	5/16	.35	5.25
17	5/8 x 1-1/4	1/4 and 3/8	3/8	.55	6.75

EXTRA BORING BARS

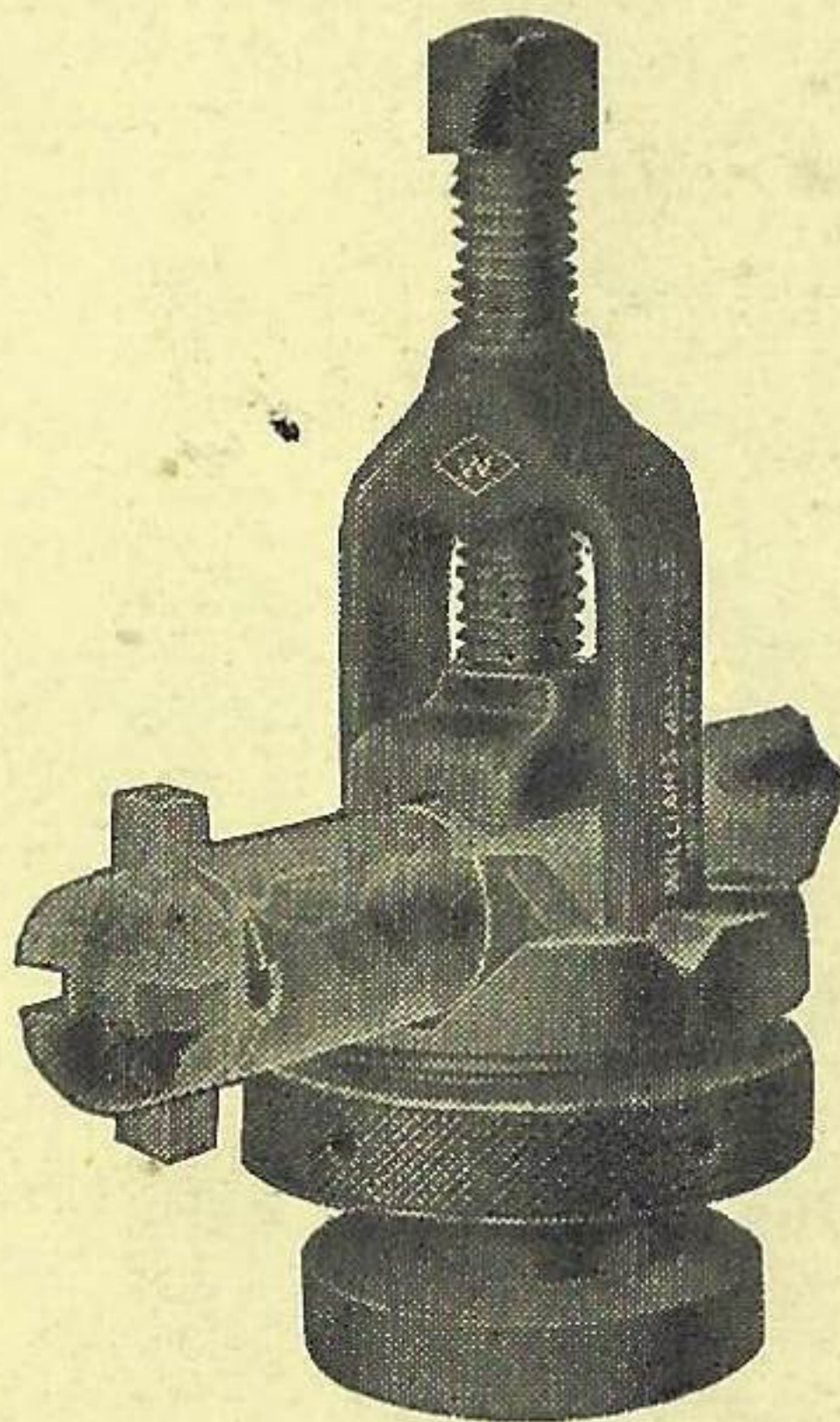
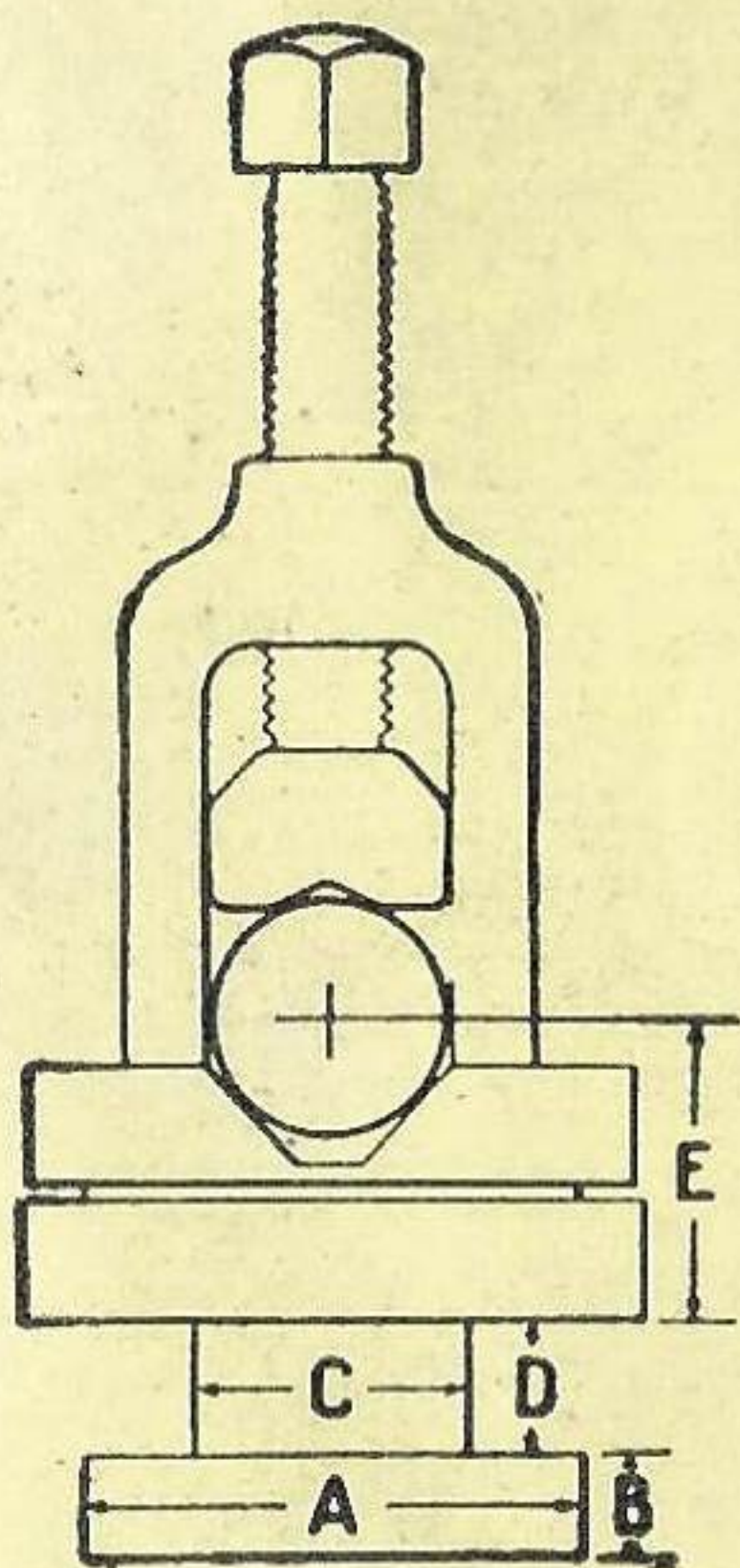
Size.....	1/8 x 4	3/16 x 4-1/2	1/4 x 5	5/16 x 6	3/8 x 7	7/16 x 8
For Holders .	15 & 16	15 to 17	15 to 17	15 to 17	16 & 17	17
Price, Each..	\$.30	\$.40	\$.50	\$.60	\$.80	\$1.10

WILLIAMS

SUPERIOR DROP-FORGED TOOLS

ADJUSTABLE BORING-TOOL POSTS

Each Post Takes Many Sizes of Bars



Furnished with either Sleeve or Plain Bar, 1 each 45° and 90°
Cutter and Wrenches.

Unless otherwise specified standard size Sleeve Bar will be supplied.
Bar and Cutter details on page 9.

Number	2	3	4	5
Post — Length over all, without Screw	6-5/8	7-5/8	9-1/8	11-1/8
*"T" Slot Flange— Diameter, A	3	3-1/2	4-1/4	5
Thickness, B	5/8	3/4	7/8	1-1/16
*"T" Slot Neck— Diameter, C	1-5/8	1-3/4	2	2-1/4
Length, D	3/4	13/16	1	1-1/4
Center Height, E	1-13/16	1-7/8	2-3/8	2-3/4
Capacity for Bars—	1/2 to 1-5/16	1/2 to 1-1/2	5/8 to 1-13/16	3/4 to 2-1/4
Hard Bar—Size	1-5/16	1-1/2	1-13/16	2-1/4
List—Complete Post: With Sleeve Bar— High Speed Cutters...	\$27.00	\$37.50	\$60.00	\$90.00
With Plain Bar— High Speed Cutters...	25.50	35.75	58.00	86.50

*The "T" Slot Flange and Neck are furnished large to allow for fitting to individual machines. For special finishing to specified dimensions, an extra charge of \$2.00 net, each, will be made.



KNURLING-TOOL HOLDERS IN TWO PATTERNS

“THE HOLDERS THAT HOLD”



Nos. OO-K to 2-K
with
Self-centering
Head and One
Pair of Knurls

Nos. 11-K, 12-K
with
Revolving Head
and 3 Pairs of
Knurls.



Williams' Knurling Tools are furnished in two patterns:—

OO-K to 2-K, with self-centering head, are fitted with ONE pair of Knurls, fine, medium or coarse—see illustration, following page. Unless otherwise specified, Medium Diamond Knurls will be supplied.

11-K and 12-K carry THREE pairs of Knurls, fine, medium and coarse—see illustration, following page. Fitted in revolving head for use as desired, without loss of time in changing from one grade of knurling to another.

Knurls are furnished in pairs, either “Diamond” or “Straight-Line” pattern; fine, medium and coarse pitch. Described on following page.

No.	Holder, Size	Standard Knurls, Size		LIST PRICE		No.
		Diam.	Face	Extra Knurls, Pair	Complete Holder	
OO-K	5/16 x 3/4 x 5	5/8	3/16	\$1.00	\$5.65	OO-K
O-K	3/8 x 7/8 x 5-1/2	5/8	3/16	1.00	6.00	O-K
1-K	1/2 x 1-1/8 x 6-5/8	3/4	1/4	1.15	6.75	1-K
2-K	5/8 x 1-3/8 x 7-1/2	3/4	1/4	1.15	8.00	2-K
11-K	1/2 x 1-1/8 x 6-5/8	3/4	1/4	1.15	9.00	11-K
12-K	5/8 x 1-3/8 x 6-5/8	3/4	1/4	1.15	10.50	12-K

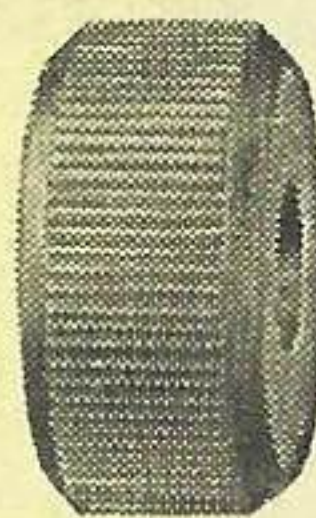
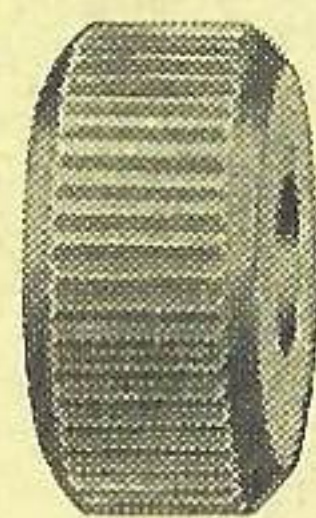
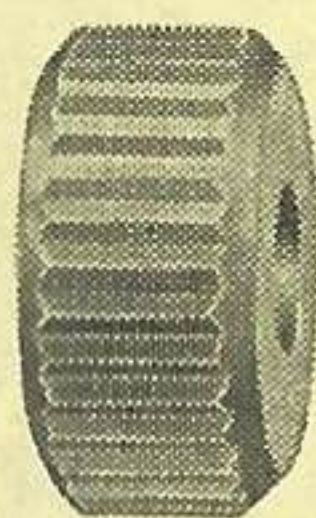
WILLIAMS

SUPERIOR DROP-FORGED TOOLS

KNURLS FOR WILLIAMS' KNURLING-TOOL HOLDERS "THE HOLDERS THAT HOLD"

Diamond Pattern

Straight-Line Pattern

Coarse
14 PitchMedium
21 PitchFine
33 PitchCoarse
14 PitchMedium
21 PitchFine
33 Pitch

Note: "Pitch" means number of teeth per linear inch.



Illustrations above show actual size of Knurling.

Since Williams' Knurls are accurately cut, sharp and perfect teeth of similar uniformity are formed in the knurled product. The hole is concentric with the cutting face. All Knurls are made from high grade tool steel and are specially hardened and tempered.

Supplied in pairs in two patterns; "Diamond" and "Straight-Line". When ordering, always state pattern and pitch desired.

"Diamond" pattern, Medium (21 pitch) will be furnished, unless otherwise specified.

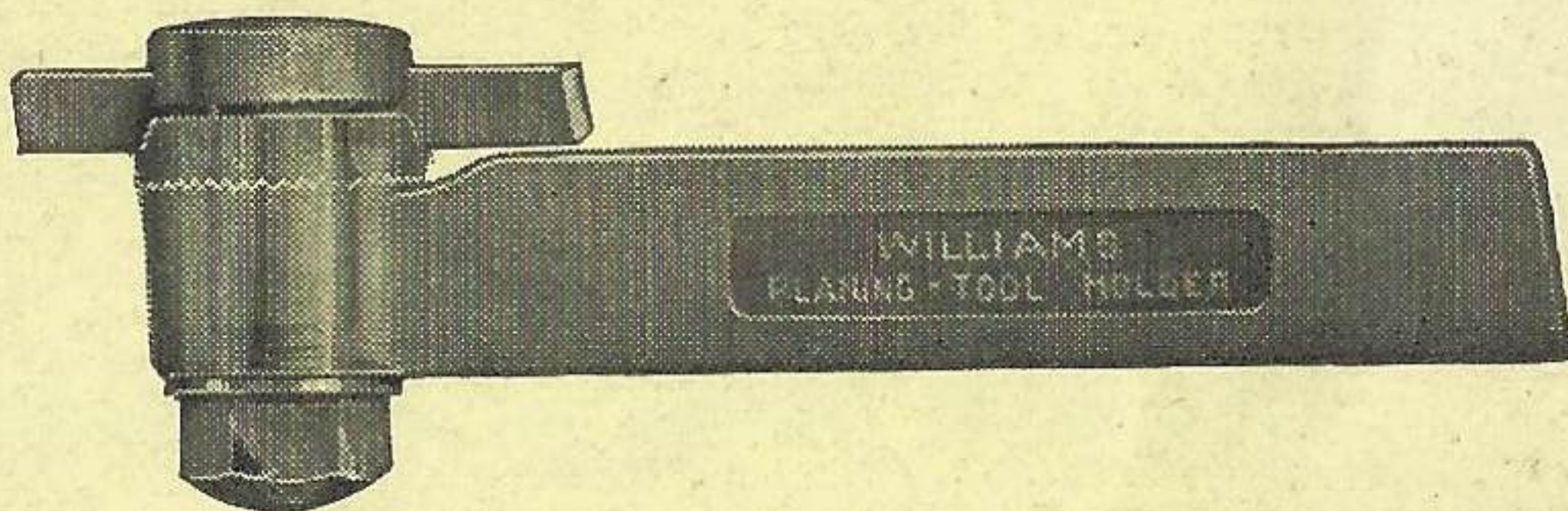
For Knurling Tool No.	Knurls, Size				LIST PRICE Per Pair	For Knurling Tool No.
	Diameter	Thickness	Face	Hole		
00-K	5/8	5/16	3/16	*7/32	\$1.00	00-K
0-K	5/8	5/16	3/16	*7/32	1.00	0-K
1-K	3/4	3/8	1/4	1/4	1.15	1-K
2-K	3/4	3/8	1/4	1/4	1.15	2-K
11-K	3/4	3/8	1/4	1/4	1.15	11-K
12-K	3/4	3/8	1/4	1/4	1.15	12-K

* Hole, old diameter 1/4 inch.



PLANING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"



Furnished with Cutter and Wrench

These rugged tools provide 24 different angles of cutter adjustment instead of the usual 5—a real advantage when working in close quarters. Excellent, also, as an offset turning tool.

Reversal of the Holder in the tool-post, so as to bring the cutting point behind the center of the shank, makes it an ideal "goose-neck" tool.

The construction assures perfect seat and holding qualities for the Cutters; the convex face of Clamp Nut provides uniform locking pressure for Cutters of either square or rectangular form.

The serrated washer, or Adjustment Ring, which sustains the fastening and working strains, is hardened and tempered. If it wears in long service, a new Ring *only* is required—not a complete Holder.

No.	Holder, Size	Cutter, Size	LIST PRICE		
			Extra Adjust-ment Ring	Cutters Only High Speed Steel	Com-plete Holder with High Speed Cutter
91	1/2 x 1 x 7	1/4 x 3/8	\$.60	\$.35	\$4.65
92	5/8 x 1-1/4 x 8-1/2	5/16 x 7/16	.68	.55	6.00
93	3/4 x 1-1/2 x 10-1/4	3/8 x 1/2	.83	.80	7.85
94	1 x 1-3/4 x 13-1/4	1/2 x 3/4	1.05	1.95	12.40
95	1-3/8 x 2 x 16-1/2	5/8 x 7/8	1.50	3.35	21.75
96	1-3/4 x 2-3/8 x 19	3/4 x 1	2.25	5.00	39.00
97	2-1/8 x 2-3/4 x 22	7/8 x 1-1/8	3.38	8.20	57.00

Posted on: August 13, 2019

Scanned by: S.R.M. of W. Seneca NY

Posted by: Brian D. Szafranski, Elma NY USA

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WILLIAMS

SUPERIOR DROP-FORGED TOOLS

HIGH SPEED STEEL CUTTERS

Require minimum of grinding only for use in Holders. All Cutters are hardened.



For Turning-Tool Holders

No.	CUTTER, SIZE		LIST Each, High Speed
	Square	Length	
000	3/16	1 3/4	\$.15
00 & 0200	3/16	1 7/8	.15
0 & 200	†1/4	2 3/8	.20
1 & 201	†5/16	2 7/8	.35
2 & 202	†3/8	3 3/8	.55
3	7/16	3 3/4	.90
4 & 204	1/2	4 1/8	1.30
5	5/8	4 3/4	2.35
6	3/4	5 1/2	3.85

† Cutters of these sizes are also suitable for turning when used in Threading-Tool, Nos. S-50 to S-52.



For Williams' Boring Bars

Bar Diam.	For Use at Angle of	CUTTER, SIZE		LIST Each, High Speed
		Square	Length	
1/2	{90° 45°	3/16	1	\$.10
		3/16	1 1/2	.12
5/8	{90° 45°	3/16	1	.10
		3/16	1 1/2	.12
3/4	{90° 45°	1/4	1 1/4	.15
		1/4	2	.19
15/16	{90° 45°	5/16	1 1/2	.24
		5/16	2 1/2	.32
1 1/8	{90° 45°	3/8	1 7/8	.35
		3/8	3	.50
1 5/16	{90° 45°	3/8	2 1/8	.40
		3/8	3 1/4	.55
1 1/2	{90° 45°	7/16	2 1/4	.60
		7/16	3 3/8	.85
1 13/16	{90° 45°	1/2	2 5/8	.90
		1/2	4	1.30
2 1/4	{90° 45°	5/8	3 1/8	1.70
		5/8	4 3/4	2.35



For Threading-Tool Holders

No.	CUTTER, SIZE		LIST Each, High Speed Finished Cutter
	Square	Length	
S-50	1/4	2 3/8	\$.45
S-51	5/16	2 7/8	.55
S-52	3/8	3 3/8	.70

Turning-Tool Cutters marked † are suitable for turning work in Threading-Tool Holders. See table above.



For Planing-Tool Holders

No.	CUTTER, SIZE		LIST Each, High Speed
	Flat	Length	
91	1/4 x 3/8	2 1/2	\$.35
92	5/16 x 7/16	3	.55
93	3/8 x 1/2	3 1/2	.80
94	1/2 x 3/4	4 1/4	1.95
95	5/8 x 7/8	5	3.35
96	3/4 x 1	6	5.00
97	7/8 x 1 1/8	7	8.20



Bevel For Cutting-Off Tool Holders

Cutter Blade Finished		*NEW Cutter Blade Finished		LIST Each, High Speed
No.	Size	No.	Size	
020-030	5/64 x 1/2	N-020-N-030	5/64 x .475	\$.60
20- 30	3/32 x 5/8	N20- N30	3/32 x .595	.65
21- 31	1/8 x 3/4	N21- N31	1/8 x .735	.90
22- 32	1/8 x 7/8	N22- N32	1/8 x .870	1.30
23- 33	3/16 x 1	N23- N33	3/16 x .940	2.15
24- 34	3/16 x 1-1/8	N24- N34	3/16 x 1.100	2.90
25- 35	1/4 x 1-1/8	N25- N35	1/4 x 1.100	4.00



Heavy Bevel For Side-Tool Holders

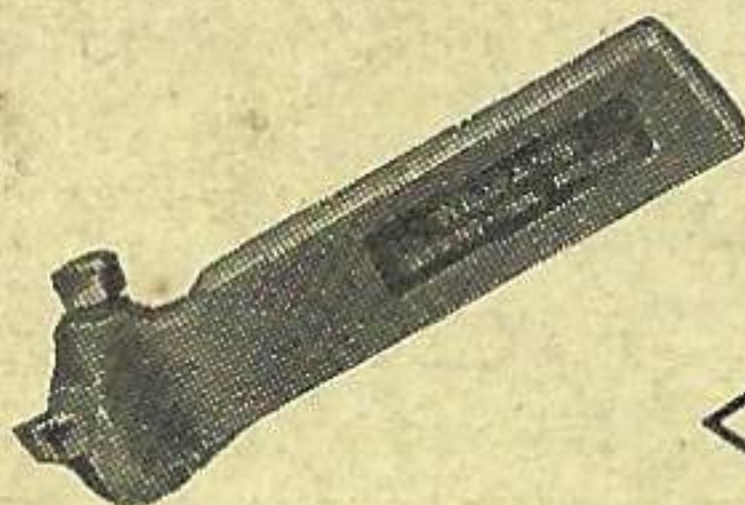
OLD Cutter Blade Finished		*NEW Cutter Blade Finished		LIST Each, High Speed
No.	Size	No.	Size	
020-030	1/8 x 1/2	N-020-N-030	1/8 x .475	\$.60
20- 30	5/32 x 5/8	N20- N30	5/32 x .595	.90
21- 31	3/16 x 3/4	N21- N31	3/16 x .735	1.40
22- 32	1/4 x 7/8	N22- N32	1/4 x .870	2.30
23- 33	5/16 x 1	N23- N33	5/16 x .940	3.40
24- 34	3/8 x 1-1/8	N24- N34	3/8 x 1.100	5.00

* New Cutter Blades will not fit old Holders, nor old Blades, new Holders.

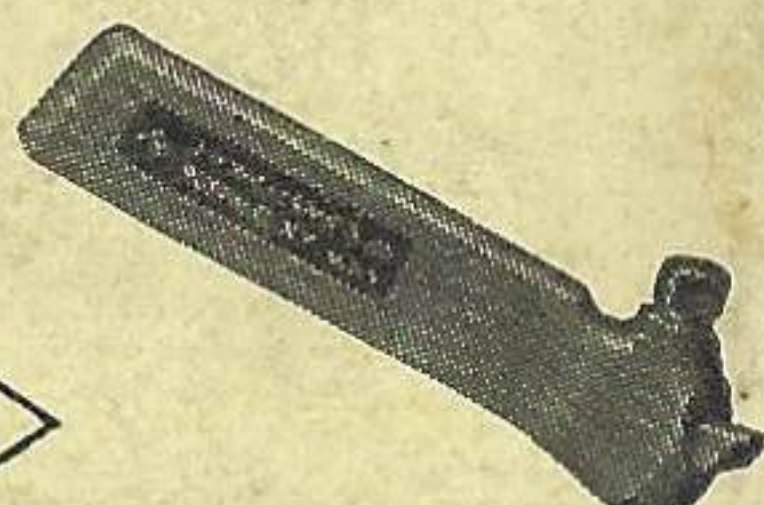
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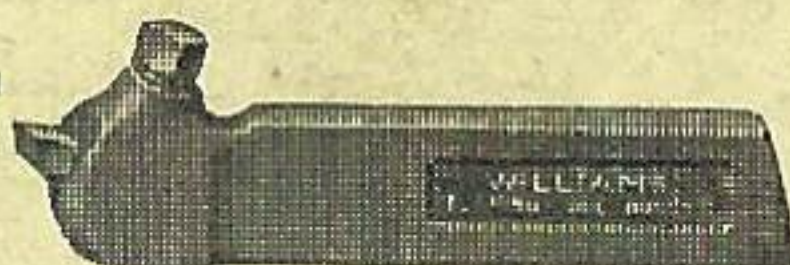
LATHE TOOL SETS



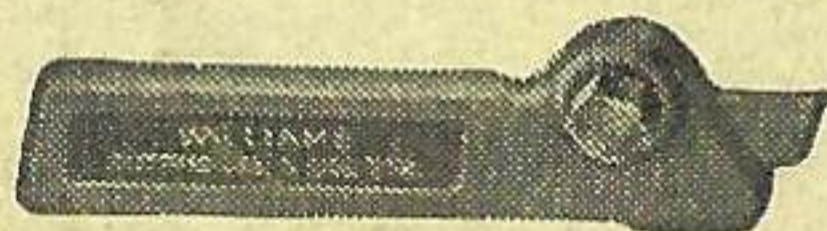
RIGHT HAND OFFSET
TURNING-TOOL HOLDER
WITH ONE CUTTER



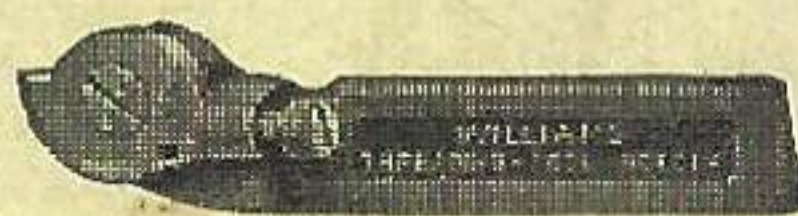
LEFT HAND OFFSET
TURNING-TOOL HOLDER
WITH ONE CUTTER



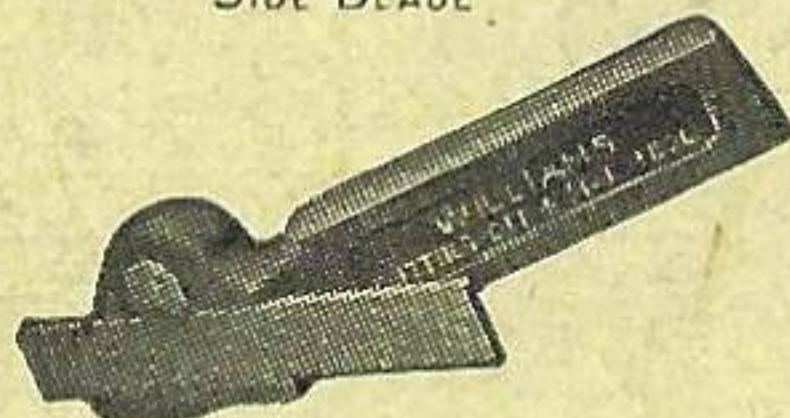
STRAIGHT TURNING-TOOL HOLDER
WITH ONE CUTTER



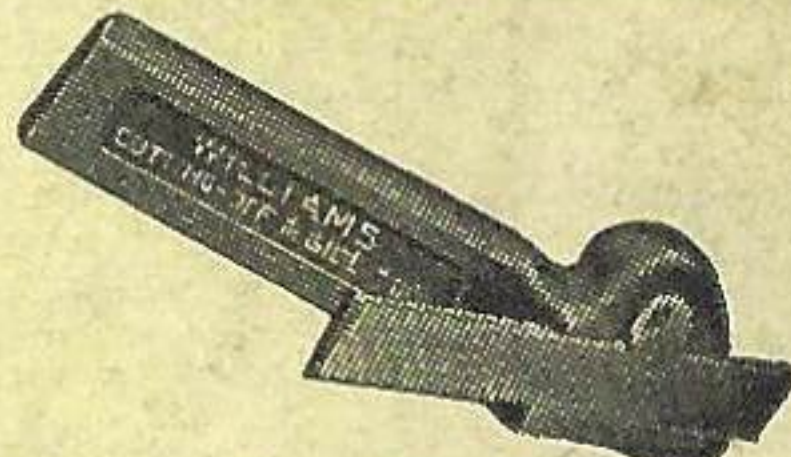
RIGHT HAND STRAIGHT
CUTTING-OFF & SIDE TOOL HOLDER
WITH ONE EACH CUTTING-OFF AND
SIDE BLADE



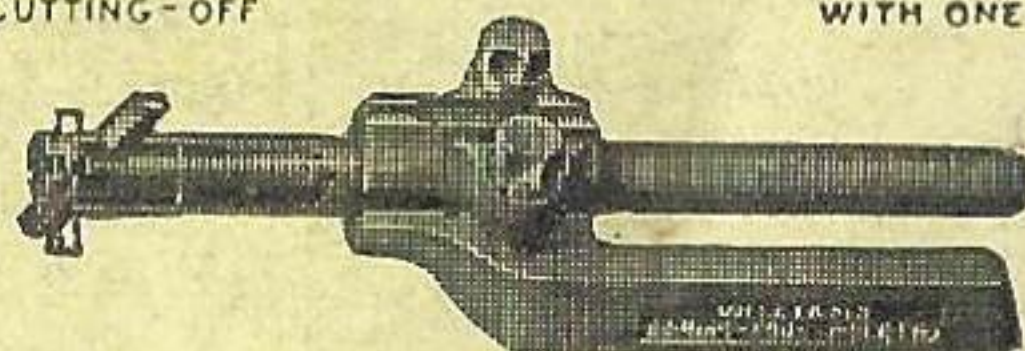
THREADING-TOOL
HOLDER
WITH FORMED CUTTER



RIGHT HAND OFFSET
CUTTING-OFF & SIDE TOOL HOLDER
WITH ONE EACH CUTTING-OFF
AND SIDE BLADE



LEFT HAND OFFSET
CUTTING-OFF & SIDE TOOL HOLDER
WITH ONE EACH CUTTING-OFF
AND SIDE BLADE



BORING-TOOL HOLDER
WITH SLEEVE BAR AND TWO CUTTERS

Six "always ready" Sets of Williams' Tool Holders provide for complete lathe service—Turning, Boring, Threading, Cutting-off and Side Work—in a *minimum number of tools*, unequalled elsewhere. High Speed Cutters furnished throughout.

Set No.	For Lathes of Approx. Swing, Inches	Holder, Size Shank	Quantity of Tools in Set	LIST Complete Set, with High Speed Cutters	Set No.
00	7 to 10	5/16x 3/4	8	\$27.50	00
0	10 to 12	3/8 x 7/8	8	29.30	0
1	14 to 16	1/2 x 1-1/8	8	35.55	1
2	16 to 18	5/8 x 1-3/8	8	46.40	2
† 3	18 to 20	3/4 x 1-5/8	7	55.25	† 3
† 4	24 to 36	7/8 x 1-3/4	6	58.20	*† 4

*Set No. 4 furnished without Boring-Tool Holder.

† Sets Nos. 3 and 4 furnished without Threading-Tool Holder.